

ABSTRACT OF THE DISCLOSURE

[0054] A fluid vaporizing device useful for vaporizing fluid into an aerosol includes a capillary tube made from an electrically conductive material, an upstream electrode connected to the capillary tube, and a downstream electrode connected to the tube and provided with an electrical resistivity sufficient to cause heating of the downstream electrode during operation. According to various manufacturing techniques (a) the downstream electrode can be made of a material having a resistivity that is approximately constant over a desired temperature range, (b) the ratio of the resistance of the downstream electrode to the resistance of the capillary tube can be selected as a function of a preset liquid flow rate through the capillary tube, (c) the tuning range over which a desired quality aerosol can be produced can be selected to compensate for dimensional tolerances during mass production, and (d) the total hot resistance of the downstream electrode and capillary tube can be adjusted to control the location of a meniscus of a liquid vaporized in the capillary tube to produce a desired quality aerosol.